013199

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

625 Indiana Avenue, NW, Suite 700, Washington, D.C. 20004-2901
(202) 208-6400

October 30, 1998

1998-013199 10/30 3:00

The Honorable Bill Richardson
Secretary of Energy
1000 Independence Avenue
Washington, D.C. 20585

Dear Secretary Richardson:

The Defense Nuclear Facilities Safety Board (Board) has been informed of the existence of an international program to compile and analyze data on the effects of nuclear radiation received over the years in the Soviet Union during its development and structuring of a nuclear weapons arsenal. This program receives a modest part of its funding through a support program under the Assistant Secretary for Environment, Safety, and Health of the Department of Energy. In particular, it is a program under EH-6, which is directed by Dr. Paul Seligman. It is also tracked by a bilateral US-Russian Joint Coordinating Committee on Radiation Effects Research (JCCRER).

Until relatively recently, most of the data used internationally as a basis for estimating the effects on humans of radiation exposure have been drawn from limited sources, as for example, the record of exposures of people to intense levels of radiation during medical treatment early in this century, and exposure of Japanese citizens to radiation at Hiroshima and Nagasaki in the two military uses of the atomic bomb. The former data are sparse, and the latter are limited to the effects of radiation received in brief though intense exposure.

The data which are now being made available from the former Soviet Union are somewhat different in character. They include numerous histories of individuals exposed to varying amounts of nuclear radiation (some substantial) delivered during a relatively long period of time. They also include a significant number of cases of important uptake by humans of radioactive matter, including plutonium. The number of cases of individuals with significant body burden of plutonium substantially exceeds that in this country. There is extensive information on the observed effects of exposures to radiation. Many of the cases reveal effects of radiation that were not experienced in the non-Soviet world, such as the incidence of what has been called "radiation illness."

At one time the data available from these sources were thought to be of little value because of possible evidence of an inferior dosimetry. This view has changed, and there is now a belief that the new information will be an important addition to the data banks underlying understanding the effects of nuclear radiation on humans. There is also growing realization of the importance of these data to understanding the effects of chronic exposure to radiation rather than

intense single exposures. They even offer to improve understanding the effects of low doses of radiation delivered over longer periods of time.

On the other hand, the data are fragile, in that they must be gathered soon in a determined program which follows up on the health history of numerous individuals who were exposed to radiation during the Soviet program, while these people are still accessible. This is a program subject to a definite time bind.

The Board is impressed by the promise of this joint US-Russian program and is concerned about the need to ensure its conduct in a timely manner. From the standpoint of potential effect, it is one of the most important research programs supported by the Department of Energy.

The Board strongly encourages the Department of Energy's continued support of the program, at a level that ensures its timely success.

Sincerely,

John T. Conway
Chairman

c: Mr. Mark B. Whitaker, Jr.